

AG Contract No : KR03-1297TRN  
ADOT ECS File No.: JPA 03-037  
TRACS No: H5348 01C  
Project No.: 093 MO 124  
Project: US 93 Hwy Big Sandy River  
Southwestern Willow Flycatcher  
TRACS No: H5348 01C  
BUDGET SOURCE ITEM No. 11102

## INTERGOVERNMENTAL AGREEMENT

BETWEEN  
THE STATE OF ARIZONA  
AND  
DEPARTMENT OF THE INTERIOR  
U.S. FISH AND WILDLIFE SERVICE  
Arizona Ecological Services Field Office

THIS AGREEMENT is entered into April 9, 2004 between the STATE OF ARIZONA, acting by and through its DEPARTMENT OF TRANSPORTATION (the "State") and UNITED STATES DEPARTMENT OF INTERIOR, FISH and WILDLIFE SERVICE, acting through the Arizona Ecological Services Field Office (the "U.S. F&WS").

### I. RECITALS

1. The State is empowered by Arizona Revised Statutes Section 28-401 to enter into this agreement and has delegated to the undersigned the authority to execute this agreement on behalf of the State.

2. The U.S. F&WS is empowered by Federal Revised Statutes Section 50-CFR17 and the Endangered Species Act of 1973, 16 USC 1361 et seq., as amended; Department of the Interior Appropriations, Public Law 107-63 to enter into this agreement, and has authorized the undersigned to execute this agreement on behalf of the U.S. F&WS.

3. Incident to the reconstruction of US 93 to a four-lane, divided configuration including a new bridge at Big Sandy River, it is anticipated that part of the construction will impact southwestern willow flycatcher habitat. As proposed by FHWA and State as a Conservation Measure included in and included as a requirement of the Biological Opinion, issued pursuant to Section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544), attached hereto and made a part hereof as Exhibit A, the State is required to provide an in-lieu payment not to exceed \$33,000.00 to the U.S. F&WS, hereinafter referred to as the "Project".

THEREFORE, in consideration of the mutual agreements expressed herein, it is agreed as follows:

NO. 26764  
Filed with the Secretary of State  
Date Filed: 04/09/04  
Genie K. Brewer  
Secretary of State

By: Timothy D. Haerigwald

## **II. SCOPE OF WORK**

### **1. The US F&WS will:**

a. Upon execution of this agreement invoice the State in an amount not to exceed \$33,000.00 for costs associated to complete the Project. Request for payment shall be submitted with the "ADOT Progress Payment" Report Form (attached). Electronic forms can be requested through Joint Project Administration, at the address provided under Section III. paragraph 5. Include the project budget, a description of activities, and Project site.

b. Be the lead agency for the Project, conduct all necessary studies and investigations towards determining the most appropriate actions for reducing and minimizing the effects on the Southwestern Willow Flycatcher at the Big Sandy Bridge; or secondarily, commit the funds elsewhere in the State of Arizona where they would contribute toward flycatcher management or recovery. The allocation, timing, and use of funds would be at the full discretion of the U.S. F&WS, as referenced on page 4, paragraph 3 of Exhibit A.

c. Annually provide an accounting of Project expenditures to the State until completion of the Project. Any monies not expended for the Project shall be returned to the State upon termination of this agreement. The Project proposed completion date is December 31, 2008. In the event the Project cannot be completed by such date, the parties will agree to extend the completion date. The extension will be agreed upon and set forth in writing.

### **2. The State will:**

a. Upon receipt of the "ADOT Progress Payment" Report Form and approval by the State, pay U.S. F&WS an amount not to exceed \$33,000.00 as the in-lieu payment for the mitigation effort.

b. Review the studies and provide comments as appropriate.

## **III. MISCELLANEOUS PROVISIONS**

1. This agreement shall remain in force and effect until completion of said Project and final payments, provided; however, either party may cancel at any time prior to the commencement of performance under this agreement, upon thirty (30) days written notice to the other party.

2. This agreement may be cancelled in accordance with Arizona Revised Statutes Section 38-511, as regards conflicts of interest on behalf of state employees.

3. The provisions of Arizona Revised Statutes Section 35-214 pertaining to audit are applicable to this contract.

4. In the event of any controversy which may arise out of this agreement, the parties hereto agree to abide by required arbitration as is set forth in Arizona Revised Statutes Section 12-1518.

5. All notices or demands upon any party to this agreement shall be in writing and shall be delivered in person or sent by mail addressed as follows:

### **CONTRACT OFFICERS**

Arizona Department of Transportation  
Joint Project Administration  
205 S. 17th Avenue – Mail Drop 616E  
Phoenix, AZ 85007

US Fish and Wildlife Service  
Reymundo F. Aragon, Chief  
PO Box 1306, Room 5108  
Albuquerque, NM 87103-1306

PROJECT OFFICER

Arizona Department of Transportation  
Larry Lindner  
205 S. 17th Avenue – Mail Drop 619E  
Phoenix, AZ 85007  
602-712-6322  
llindner@dot.state.az.us

US Fish and Wildlife Service  
Greg Beatty  
2321 West Royal Palm Road, Suite 203  
Phoenix, AZ 85021  
602-242-0210  
Greg\_Beatty@FWS.gov

6. No member of, or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this agreement, or to any benefits that may arise therefrom; but this provision shall not be construed to extend to this agreement if made with a corporation for its general benefit.

7. Pursuant to Arizona Statutes Section 11-952, (D) attached hereto is the written determination of each party's legal counsel the parties are authorized under the laws of this state to enter into this agreement and that the agreement is in proper form.

IN WITNESS WHEREOF, the parties have executed this agreement the day and year first above written.

**US DEPARTMENT OF INTERIOR  
US FISH AND WILDLIFE SERVICE**

**STATE OF ARIZONA  
Department of Transportation**

By

  
REYMONDO E. ARAGON  
Chief, Region 2, CGS

By

  
SUSAN TELLEZ  
Contract Administrator

JPA 03-037

DETERMINATION

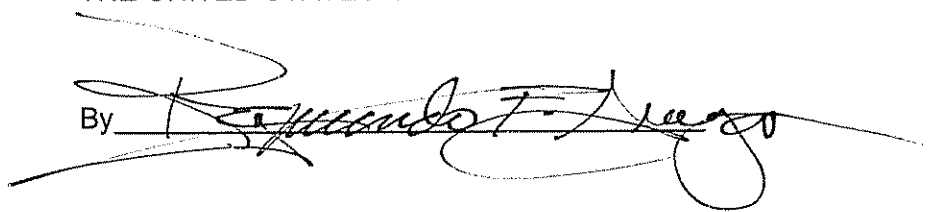
Arizona Contract No. JPA 03-037, which is an agreement between public agencies; to wit; the STATE OF ARIZONA, DEPARTMENT OF TRANSPORTATION, INTERMODAL TRANSPORTATION DIVISION, and the UNITED STATES DEPARTMENT OF INTERIOR, U.S. FISH AND WILDLIFE SERVICE, has been reviewed by the undersigned for the United States who has determined that it is in the proper form and within the powers and authority granted to the United States.

No opinion is expressed as to the authority of the State of Arizona to enter into said agreement.

DATED this \_\_\_\_\_ day of \_\_\_\_\_, 2004.

THE UNITED STATES OF AMERICA

By \_\_\_\_\_

A handwritten signature in black ink, appearing to read "Rafael T. Lopez", is written over a horizontal line. The signature is fluid and cursive, with a large loop at the end.



# United States Department of the Interior

U.S. Fish and Wildlife Service  
Arizona Ecological Services Field Office  
2321 West Royal Palm Road, Suite 103  
Phoenix, Arizona 85021-4951  
Telephone: (602) 242-0210 Fax: (602) 242-2513



In Reply Refer to:

AESO/SE  
02-21-92-F-042R1

February 25, 2003

Mr. Robert Hollis  
U.S. Department of Transportation  
Federal Highway Administration  
One Arizona Center, Suite 410  
400 East Van Buren Street  
Phoenix, Arizona 85004

RE: Reinitiation of US 93 Highway (Wickenburg to Kingman) Widening Project

Dear Mr. Hollis:

Thank you for your request for consultation pursuant to section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544), as amended (Act). Your request for reinitiation of formal consultation with a new project proposal was dated and received by us on November 26, 2002. At issue are impacts to the federally endangered southwestern willow flycatcher (*Empidonax traillii extimus*) that may result from the proposed US 93 Highway Widening Project (Wickenburg to Kingman) at the Big Sandy Bridge in Mohave County, Arizona.

The reasons for reinitiating section 7 consultation are that the project description was modified and because of the change in the status of the southwestern willow flycatcher at the Big Sandy Bridge. The Federal Highway Administration (FHWA) and Arizona Department of Transportation (ADOT) were unable to acquire and manage land to compensate for the permanent loss of southwestern willow flycatcher habitat from bridge construction at the Santa Maria and Big Sandy bridges as proposed. There was no southwestern willow flycatcher habitat to acquire from a willing seller along the Santa Maria and Big Sandy rivers. Bridge construction, originally scheduled for 2007, is now to occur in 2003. Additionally, more flycatchers were detected at the Big Sandy Bridge. Single pairs of southwestern willow flycatchers were detected in 1994 and 1997, while 10 to 16 territories were found from 2000 to 2002.

This biological opinion is based on information provided in the biological assessment, our 1997 biological opinion, the November 26, 2002, project proposal, telephone conversations, field investigations, and other sources of information. Literature cited in this biological opinion is not a complete bibliography of all literature available on southwestern willow flycatcher; bridge construction, and habitat removal and its effects; or on other subjects considered in this opinion. A complete administrative record of this consultation is on file at this office.

EXHIBIT "A"

## **Biological Opinion**

### **Consultation History**

- August 1997 - The early consultation history for this project can be found in the August 27, 1997 biological opinion (Project #2-21-92-F-042) which addressed effects to southwestern willow flycatcher at Big Sandy and Santa Maria river crossings.
- November 22, 2002 - ADOT and FHWA hosted a meeting to provide documentation and inform us that they were unable to find habitat to acquire along the Big Sandy or Santa Maria rivers as described in their proposed action from the August 27, 1997 biological opinion (U.S. Fish and Wildlife Service 1997a).
- November 26, 2002 - FHWA requests reinitiation of consultation on US 93 Big Sandy Bridge with a new project description and asks that the consultation be completed by January 31, 2003.
- January 31, 2003 - A draft biological opinion was mailed to FHWA for review.
- February 11, 2003 - Steve Thomas, FHWA, Rick Duarte and Larry Lindner, ADOT, and George Ruffner, Ecoplan met with Debra Bills and Greg Beatty, USFWS to discuss the draft biological opinion. FHWA's conservation measure to provide funding for southwestern willow flycatcher management was clarified to provide priority to flycatcher habitat at the Big Sandy Bridge. We also developed a more specific description of survey work. The length of time to perform surveys and possible cowbird trapping was also discussed.
- February 19, 2003 - Steve Thomas, FHWA called and requested that we finalize the biological opinion.

### **Description of the Proposed Action**

FHWA has proposed a change in the proposed action, including a change in schedule and a new conservation measure to compensate for the loss of southwestern willow flycatcher habitat at the Santa Maria and Big Sandy bridges, and has proposed to begin bridge construction across the Big Sandy River in 2003. The status of the southwestern willow flycatcher has also changes. All other aspects of the project proposal remain the same and are described below.

#### Corridor

The US 93 Highway widening project corridor extends from the junction of SR 89 and US 93, just northwest of Wickenburg in Maricopa County, to the junction of US 93 and I-40, east of

Mr. Robert Hollis

Kingman in Mohave County (Map 1). The long-term goal of ADOT is to provide four travel lanes on US 93 within the entire 102-mile corridor. The corridor has been divided into three segments. Segment 1 includes US 93 from I-40 [Milepost (MP) 91.5] south to Wikieup (MP 124.5). Segment 2 extends from Wikieup, across the Big Sandy River to the Santa Maria River (MP 160.5). Segment 3 extends from the southern side of the Santa Maria River to the junction of US 93 and SR 89 (MP 193.5).

Segment 2 is in mountainous terrain and includes the building of new bridges across the Santa Maria and Big Sandy rivers. The roadway has steep grades and many curves. This segment was selected for improvement first, followed by Segment 1 and finally Segment 3. The upgrade of US 93 will occur over the next 15 to 20 years. The Arizona Department of Transportation is proposing to widen US 93 between the south bank of the Santa Maria River, Yavapai County (MP 161.5, Station 1600) and Wikieup, Mohave County (MP 122.75, Station 3569). Currently the average right-of-way ranges from 200 feet (on private land) to 4009 feet (on Bureau of Land Management Land) encompassing a total of 1420 acres. The action includes the construction of emergency shoulders, guard rails and posts, bridges, concrete box culverts, corrugated metal pipes, slope contouring, and erosion control.

The area affected by the bridge construction at the Santa Maria and Big Sandy rivers was originally delineated, based on the plans and available aerial photography, with flagging tape in the field. The habitat types (i.e. cottonwood-willow-saltcedar, mesquite-acacia, and bare ground) were also defined and delineated in the field.

#### Big Sandy River

As described in the Biological Assessment for the 1997 biological opinion, the proposed Big Sandy River Bridge on US 93 will involve building a new southbound bridge downstream (west) of the existing bridge. The existing bridge will be used for northbound traffic upon completion of the new bridge. The bridges at Big Sandy River will be adjacent to each other and separated by 20 feet. The new bridge will be 880 feet long and 45.2 feet wide, the same dimensions as the existing bridge. The new bridge will be supported by 6 piers with a basal dimension of 5 feet, located approximately 125 feet apart.

All aspects of Big Sandy River bridge construction will remain the same as originally proposed, including modification or loss of a total of 6.60 acres due to construction of the bridge, piers, abutments, approach roadway, bank protection, drainage channel relocation, and fencing. This includes 1.2 acres of cottonwood-willow-saltcedar habitat, 3.7 acres of mesquite-acacia habitat, and 1.7 acres of bare ground. The 1.2 acres of cottonwood-willow-saltcedar habitat is occupied by southwestern willow flycatchers. The Big Sandy Bridge was originally scheduled for construction in 2007, but now is scheduled to begin in 2003 and will require 12 months to complete. The construction period will be between September 1 and April 15, to avoid the presence of southwestern willow flycatchers in the project area.

#### Santa Maria River

The Santa Maria River bridges have been completed as designed in the 1997 biological opinion. Upon completion, the existing bridge was removed. A total of 7.4 acres at the Santa Maria River Bridge was modified or lost following construction of the bridge, piers, abutments, approach

roadway, bank protection, drainage channel relocation, and fencing. The 7.4 acres was expected to include 2.0 acres of cottonwood-willow-saltcedar habitat, 2.8 acres of mesquite-acacia habitat, and 2.6 acres of bare ground. The 2.0 acres of cottonwood-willow-saltcedar habitat was considered to be developing/regenerating or potential southwestern willow flycatcher habitat, but unoccupied by nesting birds.

#### Conservation measures

FHWA's new proposal to compensate for loss of southwestern willow flycatcher habitat at the Big Sandy and Santa Maria rivers is to provide (through ADOT) the U.S. Fish and Wildlife Service or our chosen recipient funds, via an intergovernmental agreement (IGA), in the amount of \$33,000.00 to be used for flycatcher recovery efforts. The dollar amount was derived by using the estimated cost per acre (\$2,000) multiplied by 16.1 acres (estimated replacement of 3.2 acres of riparian habitat at a 5:1 ratio).

The IGA would be prepared once this biological opinion is completed. The allocation, timing, and use of the funds would be at the full discretion of the U.S. Fish and Wildlife Service. Management of flycatcher habitat in the action area at the Big Sandy Bridge will have priority. In the event that management can not occur at that location, funding will go toward flycatcher management or recovery elsewhere in the State of Arizona. The funds would be available to the U.S. Fish and Wildlife Service upon the onset of construction at the Big Sandy River in 2003.

Additional measures outlined in the 1997 biological opinion and reiterated in the new project description include the following:

1. Seasonal or perennial water flows will not be diverted;
2. There will be no damming or discharge of fill material into the existing river course;
3. Sand, gravel, or other material will not be removed from the existing river channel or from existing riparian areas;
4. Equipment and vehicle access through vegetated areas will be minimized;
5. Equipment and other materials will be stored outside of the 100 year floodplain;
6. Where possible, bank and main channel crossings will be avoided to prevent damage to the existing bank establishment and riparian vegetation;
7. Disturbed areas (including any work not completed at the Santa Maria River), will be revegetated with riparian-associated native plant species (Arizona Department of Transportation 1995) including Goodding's willow and Fremont cottonwood in a 3:1 ratio in conformance with standards recommended by the National Resources Conservation Service;
8. The construction period for the Big Sandy Bridge will be between September 1 and April 15, to avoid presence of southwestern willow flycatchers in the project area.



### Action area

The action area for this project is the 100-year floodplain of the Big Sandy River about one mile upstream and downstream of the existing US 93 Bridge (Map 1 and 2). The US 93 Big Sandy Bridge flycatcher site was described by Arizona Game and Fish Department (Paradzick *et al.* 2001) as separate sites “upstream” and “downstream” of the bridge and the occupied areas are wholly contained within this approximate two-mile action area.

### **Status of the Species**

#### *Southwestern Willow Flycatcher*

### Description

The southwestern willow flycatcher is a small grayish-green passerine neotropical migrant bird (Family Tyrannidae) that breeds in the southwestern U.S. and migrates to Mexico, Central America, and possibly northern South America during the non-breeding season (Phillips 1948, Stiles and Skutch 1989, Peterson 1990, Ridgely and Tudor 1994, Howell and Webb 1995). The southwestern willow flycatcher is one of four currently recognized willow flycatcher subspecies (Phillips 1948, Unitt 1987, Browning 1993). The historical breeding range of the southwestern willow flycatcher included southern California, Arizona, New Mexico, western Texas, southwestern Colorado, southern Utah, extreme southern Nevada, and extreme northwestern Mexico (Sonora and Baja) (Unitt 1987).

### Listing and critical habitat

The southwestern willow flycatcher was listed as endangered, without critical habitat on February 27, 1995 (U.S. Fish and Wildlife Service 1995). Critical habitat was later designated on July 22, 1997 (U.S. Fish and Wildlife Service 1997a). A correction notice was published in the Federal Register on August 20, 1997 to clarify the lateral extent of the designation (U.S. Fish and Wildlife Service 1997b).

On May 11, 2001, the 10<sup>th</sup> circuit court of appeals set aside designated critical habitat in those states under the 10<sup>th</sup> circuit’s jurisdiction (New Mexico). The U.S. Fish and Wildlife Service decided to set aside critical habitat designated for the southwestern willow flycatcher in all other states (California and Arizona) until it can re-assess the economic analysis. On May 2, 2002, this office sent out a scoping letter to over 800 interested parties requesting information in order to develop a critical habitat proposal.

A final recovery plan for the southwestern willow flycatcher was signed by the U.S. Fish and Wildlife Service’s Region 2 Director on August 30, 2002, and is expected to be released to the public in early 2003. The Plan describes reasons for endangerment and the current status of the flycatcher, important recovery actions, management needs in detailed issue papers, and recovery goals.

### Habitat

The southwestern willow flycatcher breeds in dense riparian habitats from sea level in California to approximately 8500 feet in Arizona and southwestern Colorado. Currently, southwestern willow flycatchers primarily use Geyer willow (*Salix geyeriana*), Coyote willow (*Salix exigua*), Goodding's willow (*Salix gooddingii*), boxelder (*Acer negundo*), saltcedar (*Tamarix* sp.), Russian olive (*Elaeagnus angustifolius*), and live oak (*Quercus agrifolia*) for nesting. Other plant species less commonly used for nesting include: buttonbush (*Cephalanthus* sp.), black twinberry (*Lonicera involucrata*), cottonwood (*Populus* spp.), white alder (*Alnus rhombifolia*), blackberry (*Rubus ursinus*), and stinging nettle (*Urtica* spp.). Based on the diversity of plant species composition and complexity of habitat structure, four basic habitat types can be described for the southwestern willow flycatcher: monotypic willow, monotypic exotic, native broadleaf dominated, and mixed native/exotic (Sogge *et al.* 1997, U.S. Fish and Wildlife Service 2002).

Tamarisk is an important component of the flycatchers' nesting and foraging habitat in Arizona and other parts of the bird's range. In 2001 in Arizona, 323 of the 404 (80%) known flycatcher nests (in 346 territories) were built in tamarisk (Smith *et al.* 2002). Some believed tamarisk might be of lesser quality for the southwestern willow flycatcher; however comparisons of reproductive performance (U.S. Fish and Wildlife Service 2002) and physiological conditions (Owen and Sogge 2002) of flycatchers breeding in native and exotic vegetation revealed no difference.

The flycatcher's habitat is dynamic and can change rapidly. Nesting willow habitat can grow out of suitability; saltcedar habitat can develop from seeds to suitability in five years; heavy runoff can remove/reduce habitat suitability in a day; or river channels, floodplain width, location, and vegetation density may change over time. Because of those changes, flycatcher "habitat" is often defined as either suitable or potential (U.S. Fish and Wildlife Service 2002). This demonstrates that areas other than existing occupied locations can be considered flycatcher "habitat" and, as a result, essential to the survival and recovery of the flycatcher (U.S. Fish and Wildlife Service 2002). The development of flycatcher habitat is a dynamic process involving maintenance, recycling, and regeneration of habitat. Flycatcher habitat can vary in suitability, location, and occupancy over time (Finch and Stoleson 2000).

### Breeding biology

Throughout its range, the southwestern willow flycatcher arrives on breeding grounds in late April and May, nesting typically begins in May and June, and young usually fledge from late June into mid-August (U.S. Fish and Wildlife Service 2002). One brood is typically raised per year, but birds have been documented raising two broods during one season and re-nesting after a failure (U.S. Fish and Wildlife Service 2002). The entire breeding cycle, from egg laying to fledging, is approximately 28 days. Southwestern willow flycatcher nests are fairly small and placement in a shrub or tree is highly variable (2.0 to 59.1 feet off the ground) (U.S. Fish and Wildlife Service 2002).

### Movements

The site and patch fidelity, dispersal, and movement behavior of adult, nestling, breeding, non-breeding, and migratory southwestern willow flycatchers are just beginning to be understood (Kenwood and Paxton 2001, Koronkiewicz and Sogge 2001). From 1997 through 2000, 66 to 78 percent of flycatchers known to have survived from one breeding season to the next returned to the same breeding site (Kenwood and Paxton 2001). Although most southwestern willow flycatchers return to former breeding areas, flycatchers can regularly move among sites within and between years (Kenwood and Paxton 2001). Within-drainage movements are more common than between-drainage movements (Kenwood and Paxton 2001). Typical distances moved range from 1.2 to 18 miles. However, long-distance movements of up to 137 miles have been recorded from the lower Colorado and Virgin rivers (McKernan and Braden 2001).

### Rangewide distribution and abundance

Unitt (1987) documented the loss of more than 70 southwestern willow flycatcher breeding locations rangewide (peripheral and core drainages within its range), estimating the entire subspecies population at 500 to 1000 pairs. There are currently 221 known southwestern willow flycatcher breeding sites in California, Nevada, Arizona, Utah, New Mexico, and Colorado (all sites from 1993 to 2001 where a resident flycatcher has been detected) holding approximately 986 territories (Table 1) (Sogge *et al.* 2002., U.S. Fish and Wildlife Service 2002). Flycatcher territories have increased since the bird was listed and some habitat remains unsurveyed; however, after nearly a decade of intense surveys, the existing numbers are consistent with the upper end of Unitt's 1987 estimate. About 40 to 50 percent of the 986 territories (Table 1) currently found throughout the subspecies range are located at three general locations (Cliff/Gila Valley - NM, Roosevelt Lake - AZ, San Pedro/Gila confluence - AZ).

Table 1. Rangewide population status for the southwestern willow flycatcher based on 1993 to 2001 survey data for Arizona, California, Colorado, New Mexico, Nevada, Utah, and Texas<sup>1</sup>.

State	Number of sites with WIFL territories 1993-01 <sup>2</sup>	Percentage of sites with WIFL territories 1993-01	Number of territories <sup>3</sup>	Percentage of total territories
Arizona	95	43 %	359	36 %
California	77	35 %	256	26 %
Colorado	5	1 %	37	4 %
Nevada	10	5 %	73	7 %
New Mexico	32	15 %	258	26 %
Utah	2	1 %	3	0.3%
Texas	?	?	?	?
Total	221	100 %	986	100 %

<sup>1</sup>Sogge *et al.* 2002.

<sup>2</sup>Site boundaries are not defined uniformly throughout the bird's range.

<sup>3</sup> Total territory numbers recorded are based upon the most recent years survey information from that site between 1993 and 2001.

The subspecies' population is comprised of extremely small, widely-separated breeding groups including unmated individuals. Rangewide, 76 percent of all sites from 1993 to 2001 had 5 or fewer flycatcher territories present at the site (Sogge *et al.* 2002). In Arizona, 63 percent (29/46) of the sites where flycatchers were found in 2001 (Smith *et al.* 2002) were comprised of 5 or fewer territories, and only one Arizona site had greater than 20 territories. Flycatchers no longer occur (based upon most recent years survey data) at 65 of the 221 sites located and/or tracked rangewide since 1993 (Sogge *et al.* 2002).

Southwestern willow flycatchers are believed to function as a group of meta-populations (U.S. Fish and Wildlife Service 2002). The large distances between breeding groups and small size of those populations reduces meta-population stability and increases the risks of local extirpation due to stochastic events, predation, cowbird parasitism, and other factors (U.S. Fish and Wildlife Service 2002). Having 40 to 50 percent of the entire subspecies at just three general locations can create great instability should catastrophic events occur that would remove or significantly reduce habitat suitability at those places. Greater meta-population stability can be reached through developing many larger sites in closer proximity to each other spread across the subspecies range (Lamberson *et al.* 2000, U.S. Fish and Wildlife Service 2002).

#### Arizona distribution and abundance

Unitt (1987) concluded that "...probably the steepest decline in the population level of *E.t. extimus* has occurred in Arizona..." Historical records for Arizona indicate the former range of the southwestern willow flycatcher included portions of all major river systems (Colorado, Salt, Verde, Gila, Santa Cruz, and San Pedro rivers) and major tributaries, such as the Little Colorado River and headwaters, and White River.

In 2001, 346 territories were known from 46 sites along 11 drainages in Arizona (Smith *et al.* 2001). The lowest elevation where territorial pairs were detected was 459 feet at Topock Marsh on the Lower Colorado River; the highest elevation was at the Greer River Reservoir (8202 feet).

As reported by Smith *et al.* (2002), the largest concentrations or general breeding locations of willow flycatchers in Arizona in 2001 were at the Salt River and Tonto Creek inflows to Roosevelt Lake (255 flycatchers, 141 territories); near the San Pedro/Gila river confluence (219 flycatchers, 118 territories); Gila River, Safford area (46 flycatchers, 21 territories); Alamo Lake on the Bill Williams River (includes lower Santa Maria and Big Sandy river sites) (39 flycatchers, 21 territories); Topock Marsh on the Lower Colorado River (26 flycatchers, 14 territories); Lower Grand Canyon on the Colorado River (21 flycatchers, 12 territories); Big Sandy River, Wikieup (14 flycatchers, 10 territories); and Alpine/Greer on the San Francisco River/Little Colorado River (5 flycatchers, 3 territories). The greatest numbers of flycatchers are found at two locations. Roosevelt Lake and the San Pedro/Gila confluence make up 259 (75%) of the 346 territories known in the state.

Only 68 (20%) of all known Arizona flycatcher territories in 2001 (40 on Gila River, 26 on Colorado River, 2 on Bill Williams River) were found below dams. Territories were primarily found on free-flowing streams or surrounding impoundments. At Roosevelt (n=141) and Alamo (n=21) lakes, 162 territories (47% of statewide total) are found in the dry conservation space of the lake (Smith *et al.* 2002). Recorded for the first time in the 2002 season, 5 to 10 territories were discovered in the conservation space of Horseshoe Reservoir on the Verde River (M. Ross, U.S. Forest Service, pers. comm.).

While numbers have increased in Arizona and significantly at a few specific areas, distribution throughout the state has not changed much. Soon after listing, following the 1996 breeding season, 145 territories were known to exist in Arizona. In 2001, 346 territories were detected; a statewide increase of 201 territories. Since listing, the increase of 184 territories (75 to 259) at Roosevelt Lake and at San Pedro/Gila River confluence represents almost 90 percent of the statewide growth. Survey effort was initially a factor in detecting more birds at San Pedro/Gila river confluence (more recently, habitat growth has occurred), but the Roosevelt population grew as a result of increased habitat development and bird reproduction.

Recovery and survival of the flycatcher depends not only on numbers of birds, but territories/sites that are well distributed (U.S. Fish and Wildlife Service 2002). Currently, population stability in Arizona is believed to be largely dependent on the presence of two large populations (Roosevelt Lake and San Pedro/Gila River confluence). Therefore, the result of catastrophic events or losses of significant populations either in size or location could greatly change the status and survival of the bird. Conversely, expansion into new habitats or discovery of other populations would improve the known stability and status of the flycatcher.

Some areas of Arizona have recently declined in known flycatcher abundance, specifically northern Arizona near/along the Colorado Plateau east through the White Mountains in central/eastern Arizona. Small populations have existed along the Colorado River in the Grand Canyon and upper Lake Mead (n=13), Little Colorado River (n=2), San Francisco River (n=1), and Verde River (no information in 2001). The known populations at these sites declined from a known high of 35 territories in 1996 to 16 territories in 2001 (Smith *et al.* 2002).

In 2002, drying of habitat and subsequent loss of habitat suitability at Roosevelt Lake and other locations in Arizona (possibly as result of prolonged drought and water management) resulted in reductions in productivity and possible increases in cowbird parasitism and predation (T. McCarthy, AGFD, pers. comm.). The combined loss of habitat suitability and productivity with the future inundation of habitat at Roosevelt Lake could negatively impact the status of the southwestern willow flycatcher in Arizona and possibly throughout the subspecies range (E. Paxton, USGS, pers. comm.). These losses are expected to alter the movement, recruitment, and recovery of the bird and reduce numbers in Arizona closer to when the bird was listed in 1995. Efforts to mitigate for the loss of habitat at Roosevelt, through the soon-to-be completed Roosevelt Habitat Conservation Plan, are expected to take time in order to be effective. The

result of these changes places a critical need to improve flycatcher habitat development, security, and management in Arizona and throughout the bird's range, and also places a higher value on maintenance of existing flycatcher nesting locations.

#### Status of southwestern willow flycatcher in Bill Williams Management Unit

The Bill Williams Management Unit (found within the lower Colorado River Recovery Unit), as identified in the Southwestern Willow Flycatcher Recovery Plan consists of three rivers where flycatchers can likely be found: the Big Sandy, Santa Maria, and Bill Williams rivers (U.S. Fish and Wildlife Service 2002). The Lower Colorado Recovery Unit is considered one of the least stable Recovery Units throughout the southwestern willow flycatcher's range (U.S. Fish and Wildlife Service 2002). According to the Recovery Plan (U.S. Fish and Wildlife Service 2002), 100 southwestern willow flycatcher territories and double the amount of habitat are needed in the Bill Williams Management Unit for reclassification. A total of 32 flycatcher territories were known in the Bill Williams Management Unit at the end of 2001 (U.S. Fish and Wildlife Service 2002).

From 1993 to 2000, territorial flycatchers were surveyed at 27 sites and recorded at 9 sites throughout the Bill Williams Management Unit (Paradzick *et al.* 2001). Flycatchers have been detected breeding along the Bill Williams River at four sites near its Colorado River confluence, one site at Alamo Lake, three sites on the Big Sandy River, and one site on the Santa Maria River.

#### Reproductive success

In 2001, a total of 426 nesting attempts were documented in Arizona at 40 sites (Smith *et al.* 2001). Of the 329 nests monitored, 58 percent (n=191) were successful, 35 percent failed (n=114), and 7 percent (n=24) had an outcome which could not be determined (Smith *et al.* 2001).

Intensive nest monitoring efforts in California, Arizona, and New Mexico have shown that cowbird parasitism and/or predation can result in the following: failure of the nest; reduced fecundity in subsequent nesting attempts; delayed fledging; and reduced survivorship of late-fledged young. The probability of a southwestern willow flycatchers successfully fledging its own young from a cowbird parasitized nest is low (U.S. Fish and Wildlife Service 2002). Documented predators of southwestern willow flycatcher nests identified to date include common king snake (*Lampropeltis getulus*), gopher snake (*Pituophis melanoleucos affinis*), Cooper's hawk (*Accipiter cooperii*), yellow-breasted chat (*Icteria virens*), and western screech owl (*Otus kennicottii*) (Paxton *et al.* 1997, McCarthey *et al.* 1998, Paradzick *et al.* 2000, Smith *et al.* 2002). It is expected that other common predators of passerines, such as grackles and cowbirds (Woodward and Stoleson 2002), also kill or eat flycatcher eggs and nestlings.

Past consultations

Since listing in 1995, at least 80 Federal agency actions have undergone (or are currently under) formal section 7 consultation throughout the flycatcher's range (Appendix 1). Six actions have resulted in jeopardy decisions. Many activities continue to adversely affect the distribution and extent of all stages of flycatcher habitat throughout its range (development, urbanization, grazing, recreation, native and non-native habitat removal, dam operations, river crossings, ground and surface water extraction, etc.). Stochastic events also continue to adversely affect the distribution and extent of flycatcher habitat.

Anticipated or actual loss of occupied flycatcher habitat due to Federal or federally permitted projects (modification of Roosevelt Dam, operation of Lower Colorado River dams, etc.) has resulted in biological opinions that led to acquisition of otherwise unprotected property specifically for the southwestern willow flycatcher. Small portions of the lower San Pedro River were acquired by the Bureau of Reclamation as a result of raising Roosevelt Dam and are now currently under the management of The Nature Conservancy (about 20 flycatcher territories were detected on this property in 2002, S. Sferra, U.S. Bureau of Reclamation, pers. comm.). Commitments to acquire and manage unprotected habitat specifically for breeding flycatchers have been made for loss of flycatcher habitat along the Lower Colorado River (Operations of Colorado River dams and 4.4 Plan/Change in Points of Diversion), Verde River (Mingus Ave. Bridge), Tonto Creek and Salt River (raising of Roosevelt Dam) in AZ and Lake Isabella, CA (operation of dams).

The U.S. Fish and Wildlife Service's Jeopardy Biological Opinion (U.S. Fish and Wildlife Service 1996) for the raising of Roosevelt Dam anticipated incidental take of 45 pairs (or 90 flycatchers) around the perimeter of Roosevelt Lake. However, an additional 96 territories (for a total of 141 territories representing 14% of all territories in the subspecies range and 40% of all known territories in Arizona) were found at Roosevelt Lake by 2001. Nearly all territories were located in the center of the conservation pool surrounded by the area consulted on by the Bureau of Reclamation, but not addressed by that consultation. Thus, the first large storm runoff that enters Roosevelt Lake is expected to inundate large areas of habitat used by breeding flycatchers. The Salt River Project, operators of Roosevelt Dam, are currently seeking an incidental take permit for all southwestern willow flycatchers and their habitat at Roosevelt Lake by developing a Habitat Conservation Plan which is expected to be issued by us in February 2003.

**ENVIRONMENTAL BASELINE**

The environmental baseline includes past and present impacts of all Federal, State, or private actions in the action area, the anticipated impacts of all proposed Federal actions in the action area that have undergone formal or early section 7 consultation, and the impact of State and private actions which are contemporaneous with the consultation process. The environmental baseline defines the current status of the species and its habitat in the action area to provide a platform from which to assess the effects of the action now under consultation.

The Santa Maria River portion of this project, as described in our original 1997 opinion (U.S. Fish and Wildlife Service 1997c), has already been completed. Incidental take was provided for one pair of flycatchers. As a result, that portion of the proposed action and effects have occurred and are factored into the status of the species, but are not part of the action area addressed in this opinion.

Along the Big Sandy River, past and present Federal, State, private, and other human activities that may affect the southwestern willow flycatchers and maintenance and development of its habitat include livestock grazing, agriculture, mining, water diversions, sand and gravel operations, road and bridge construction, and recreational activities. Other than the first opinion to address the clearing of flycatcher habitat (U.S. Fish and Wildlife Service 1997c), no other Section 7 consultations concerning impacts to the flycatcher have been completed within the action area.

The Big Sandy and Santa Maria rivers are part of the Bill Williams watershed which drains south and west from its origin along the western margin of the Colorado Plateau to enter the Colorado River just upstream from Parker Dam, Arizona-California (Minckley 1985). The Bill Williams watershed has undergone significant changes over the last 125 years after European settlers colonized the area. Livestock grazing, agriculture, and mining have significantly changed the biotic and abiotic features of the system (Minckley 1985).

Historical data characterizing biological communities in Arizona and along the Big Sandy River prior to the 1800s are rare. Records from 1853 describe the Big Sandy as being lined by dense riparian vegetation dominated by willows. Swamps resulting from beaver dams were common (Davis 1973). The river alternated between riffles and beds of sand until it neared its confluence with the Bill Williams River where it became a continuous stream of clear water several feet deep (Davis 1973).

Flows on the Big Sandy River are very dynamic. The annual mean flow of the Big Sandy River from 1967 to 1999 ranged from 4.15 cubic feet per second in 1977 to 582 cubic feet per second in 1993. The section in the action area is perennial. Flows during the summer can be only a few cubic feet per second, but during the largest storms, like that during February of 1993, can reach just over 68,000 cubic feet per second (U.S. Geological Survey 2002).

Southwestern willow flycatchers have also been detected breeding at single sites along the lower Big Sandy and Santa Maria rivers just above the Bill Williams River. The US 93 Big Sandy Bridge is the second largest flycatcher breeding location in the Bill Williams Management Unit. It is comprised of two sites, one immediately downstream and one upstream of the US 93 Bridge. This location holds the seventh largest number of breeding flycatchers in the State of Arizona (Smith *et al.* 2002).



### Status of the species in the action area

The status of the southwestern willow flycatcher in the action area at the US 93 Big Sandy Bridge has changed since completion of the 1997 biological opinion. In 1994 and 1997, very limited surveys at the Big Sandy Bridge found single pairs of flycatchers. As a result of this project and the development of a draft Environmental Impact Statement prepared by the U.S. Bureau of Land Management and Western Area Power Administration (2001) for a possible power plant (Big Sandy Energy Project), presence/absence flycatcher surveys (Sogge *et al.* 1997) have improved our knowledge about flycatchers at the US 93 Big Sandy Bridge (Paradzick *et al.* 2001, Smith *et al.* 2002, T. McCarthey, Arizona Game and Fish Department, pers. comm.). More extensive surveys discovered 16 territories (13 downstream and 3 upstream) in 2000, 10 (10 downstream and 0 upstream) in 2001, and 14 (14 downstream, upstream not checked) in 2002. These numbers are a minimum due to survey methodology. These surveys were not conducted to determine the exact distribution, abundance (number of territories), and extent of habitat used by nesting flycatchers at the US 93 Big Sandy bridge area. No surveys were conducted to determine reproductive success, causes for nest failure, cowbird parasitism, etc. Habitat removal is to occur immediately downstream of the current bridge at the site where the most flycatchers were detected. It is believed that all occupied southwestern willow flycatcher habitat extends the entire length of the action area a mile upstream and downstream of the US 93 Big Sandy Bridge. This land is all privately owned.

In early 2002, the U.S. Bureau of Reclamation signed a five year conservation easement with Byner Cattle Company for 105 acres of habitat immediately downstream of the US 93 Big Sandy Bridge within the action area. Riparian habitat in this area used by flycatchers for nesting is a combination of cottonwood, willow and saltcedar. This easement was acquired in order to meet requirements of our Biological Opinion for Operations on the Lower Colorado River (U.S. Fish and Wildlife Service 1997d) for inundation of occupied southwestern willow flycatcher habitat at Lake Mead.

In May 2002, during the nesting season, Caithness Big Sandy LLC, owners of land immediately downstream and directly adjacent to Byner Cattle Company, removed about an acre of occupied southwestern willow flycatcher habitat within the action area. This land clearing occurred along a water diversion ditch that originates on Byner Cattle Company land and runs through the flycatcher habitat.

## **EFFECTS OF THE ACTION**

Effects of the action refer to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated and interdependent with that action, that will be added to the environmental baseline. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration. Indirect effects are those that are caused by the proposed action and are later in time, but are still reasonably certain to occur.

*Direct and indirect effects*

The effects analysis for this reinitiation will address just those effects at the Big Sandy River. The first analysis of effects to the flycatcher (U.S. Fish and Wildlife Service 1997) established that a permanent loss and modification of approximately 3.2 acres of occupied nesting/foraging, suitable flycatcher habitat, and developing/regenerating flycatcher riparian habitat at the Big Sandy (1.2 acres) and Santa Maria (2.0) acres rivers will occur. As stated earlier, work has already been completed at the Santa Maria River Bridge, which has been factored into the status of the species.

It is likely the extent and/or quality of riparian habitat has continued to change since 1997 at the Big Sandy River, and is likely a little different than originally calculated. While the area or footprint of the project at the Big Sandy River is not projected to change, it is likely that riparian vegetation grew in the 1.7 acres categorized as bare ground. Since early 1998, the daily mean streamflow has never exceeded 100 cubic feet per second (U.S. Geological Survey 2002). Therefore, no recent large scouring floods have occurred since the original consultation. The quality of all riparian habitat in the action area has likely changed since the project was initially evaluated, with vegetation continuing to grow. This continued growth of vegetation may have helped contribute to the increase in known number of flycatcher territories in the action area (see Environmental Baseline - status of the species in the action area).

Effect of removal and fragmentation of occupied flycatcher habitat at Big Sandy River

Eliminating occupied southwestern willow flycatcher habitat, even as little as 1.2 acres, limits recovery and survival of the species. Riparian habitat in the Southwest is naturally rare and patchy, occurring as widely separated ribbons of forest in a primarily arid landscape. In Arizona, for example, riparian habitat comprises less than 0.5 percent of the landscape (Strong and Bock 1990). The actual extent of habitat suitable for the southwestern willow flycatcher is more restricted, especially in the exceptionally arid Bill Williams Management Unit in western Arizona, where many miles of dry riverbed exist along the Santa Maria and Big Sandy rivers.

Wide-ranging or highly mobile species that rely on naturally patchy habitats, such as the southwestern willow flycatcher, persist at regional scales as meta-populations, or local breeding groups that are linked together and maintained over time through immigration and emigration (Pulliam and Dunning 1994, U.S. Fish and Wildlife Service 2002). Flycatchers, as neo-tropical migrants, have very high site fidelity to the location of breeding patches, returning to the same location to breed annually (U.S. Fish and Wildlife Service 2002). Persistence of local breeding groups is a function of the group's size (numbers of individuals) and the ability of individuals to disperse from one breeding location to another. Fragmentation, degradation, and elimination of habitat reduces the chance of an individual successfully finding suitable habitat by isolating habitat patches. Searching for increasingly isolated patches leaves individuals more vulnerable to mortality from starvation or predation and can result in the loss of breeding opportunities.

As described in the 1997 biological opinion, the removal of riparian vegetation at the US 93 Big Sandy River Bridge site will undoubtedly alter areas used by breeding southwestern willow flycatchers, resulting in reduced productivity. Habitat loss and fragmentation combine to isolate and reduce in number and size the spaces necessary for breeding, feeding, sheltering, and migrating. Loss and reduction of space to carry out a species' life cycle increases the probability of extinction of local breeding groups, particularly those that consist of few individuals (Pulliam and Dunning 1994, U.S. Fish and Wildlife Service 2002). Habitat loss and fragmentation ultimately reduces the viability of a meta-population whole.

Fragmentation and degradation of habitat in and around southwestern willow flycatcher nesting areas increases the likelihood of cowbird parasitism and nest predation (U.S. Fish and Wildlife Service 2002). The loss of riparian habitat at the Big Sandy River will reduce the amount and density of riparian habitat in and around nesting flycatchers. The habitat reduction and degradation leaves nesting and foraging flycatchers closer to edges and, as a result, more exposed and accessible to predators and brood parasites.

#### Effect of roads adjacent to flycatcher habitat at Big Sandy River

The widening of US 93 at the Big Sandy River will most likely result in an increase in speed traveled by vehicles using the road and possibly an increase in the number of vehicles using the road. We anticipate that this will have the long-term effect of reducing overall habitat suitability for the southwestern willow flycatcher. Foppen and Reijnen (1994) and Reijnen and Foppen (1994) documented reduced breeding success, lower breeding densities, and higher dispersal rates of willow warblers (*Phylloscopus trochilus*) breeding next to roads that bisected forest habitat. Sogge (1995) noted that the population decline and changes in distribution of willow flycatcher territories at Tuzigoot on the Verde River in Arizona were consistent with other studies documenting adverse effects of roads that bisect habitat. Tuzigoot has gone unoccupied since 1996 (Paradzick *et al.* 2001). Additionally, a willow flycatcher was killed by an automobile on a rural road that bisects southwestern willow flycatcher habitat in the White Mountains of Arizona (Sferra *et al.* 1995, U.S. Fish and Wildlife Service 2002). Flycatchers colliding with vehicles at the Big Sandy Bridge is expected to be a constant threat, but infrequent occurrence.

#### Effect of the timing of project construction at Big Sandy River

Bridge construction at the Big Sandy River is proposed to begin in 2003, but occur outside of the flycatcher breeding season which occurs from April 15 to September 1. As a result, we do not expect that actual construction activities will cause adverse effects to southwestern willow flycatchers nesting or raising young.

#### Long-term effects of habitat removal and degradation at Big Sandy River

The long-term effects to southwestern willow flycatchers from 1.2 acres of habitat removal and degradation at the US 93 site at the Big Sandy River Bridge are difficult to assess. The dynamic

nature of the Big Sandy River and effects of flooding will likely result in changes in the regeneration, location, extent, and quality of habitat. Yet, what is certain is that the new bridge at the Big Sandy River will permanently remove a portion of occupied southwestern willow flycatcher habitat and hamper its ability to regenerate.

#### Effect of revised conservation measures

FHWA has proposed to compensate for lost habitat at Big Sandy and Santa Maria rivers with funds equal to the cost of land near Wikieup, AZ at a 5:1 ratio (16.1 acres total) as described in the project description (\$33,000) for flycatcher recovery and management efforts. Since land could not be acquired on the Big Sandy or Santa Maria rivers as initially proposed in 1997, the new proposal is expected to target the management of southwestern willow flycatcher habitat at the Big Sandy Bridge. Improvements to ongoing land management (cattle guards, better fencing, signs, restoration, etc.) and management of regenerating habitat following high river flows could increase the acreage and suitability of flycatcher habitat and increase reproductive performance. However, the use of these funds in the action area will be dependent on the extent allowed by the local land owner and owner of any conservation easement. Should we be unable to use these funds for flycatcher management at the Big Sandy Bridge, then the funds will be used for flycatcher management or recovery efforts at another location(s) within the State of Arizona.

#### Summary

The removal and degradation of riparian habitat for construction of the US 93 Big Sandy River bridge will remove flycatcher habitat, reduce number of breeding territories, reduce survivorship and productivity of breeding flycatchers, and reduce productivity of flycatchers from predation and brood parasitism. The widening of US 93 could increase collision hazards to nesting, unmated, foraging, perching, fledgling, dispersing, and migrating southwestern willow flycatchers.

#### **Cumulative Effects**

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

It is anticipated that the ongoing private actions described in the Environmental Baseline will continue in the action area. Continued cattle grazing in the riparian areas in and adjacent to the action area is expected to limit the development of suitable southwestern willow flycatcher habitat (U.S. Fish and Wildlife Service 2002) and provide a source of brood parasites. The limited water sources in the Wikieup area and increasing water demand for commercial, residential, and/or agricultural needs are expected to further remove water from the Big Sandy River at the action area and adversely affect the maintenance and development of riparian habitat.

## Conclusion

After reviewing the current status of the southwestern willow flycatcher, the environmental baseline for the action area, the effects of US 93 Wickenburg-Kingman Highway Widening Project, and the cumulative effects, it is our biological opinion that this action, as proposed, is not likely to jeopardize the continued existence of the southwestern willow flycatcher. No critical habitat has been designated for this species, therefore, none will be affected. Only 1.2 acres of occupied southwestern willow flycatcher habitat will be permanently lost and FHWA has incorporated project features that will help reduce effects of construction in the action area and provided funds to acquire land outside of the action area or otherwise contribute to recovery efforts.

## Incidental Take Statement

Section 9 of the Act and Federal regulations pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. "Take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. "Harm" is defined (50 CFR 17.3) to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. "Harass" is defined (50 CFR 17.3) as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. "Incidental take" is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary and must be undertaken by FHWA so that they become binding conditions of any grant or permit issued to the (applicant), as appropriate, for the exemption in section 7(o)(2) to apply. FHWA has a continuing duty to regulate the activity covered by this incidental take statement. If FHWA (1) fails to assume and implement the terms and conditions or (2) fails to require the (applicant) to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, FHWA must report the progress of the action and its impact on the species to this office as specified in the incidental take statement. [50 CFR §402.14(i)(3)].

We anticipate that incidental take of southwestern willow flycatchers at US 93 Big Sandy River Bridge will occur. Nesting southwestern willow flycatcher habitat at the US 93 Big Sandy Bridge will be removed by construction activities, and regeneration will be prevented by the

building of a bridge. All flycatchers returning to breed in habitat removed by construction activities are unlikely to find suitable habitat to find mates, nest, and breed successfully for an unknown amount of time, which will cause displacement, increase energetic costs, and reduce productivity and survivorship. The removal, reduction, degradation, and fragmentation of southwestern willow flycatcher riparian habitat is expected to increase nest predation and brood parasitism of southwestern willow flycatchers nesting closest to the new US 93 Big Sandy Bridge. Due to the increase in the amount of vehicles and proximity (nesting closer to new US 93 Big Sandy Bridge), there will likely be an increase in flycatcher-vehicle collisions.

### **Amount or Extent of Take**

In the 1997 biological opinion, we anticipated take of 4 individuals at two territories from harassment through reduced productivity and survivorship of individuals attempting to breed in modified habitat or from individuals dispersing and attempting to breed in habitat outside of the action area in the construction year and following year. One bird was anticipated to be killed each decade from collision over the life of the project.

In this reinitiation, we anticipate four individuals from two southwestern willow flycatcher nesting pairs will be taken in the form of harm and/or harassment through displacement, reduced productivity, and reduced survivorship as result of permanent removal of 1.2 acres of occupied nesting habitat. Although neo-tropical migratory southwestern willow flycatchers spend only part of the year at the construction site, the area is still considered occupied because of their high site fidelity (U.S. Fish and Wildlife Service 2002). Given the increase in known flycatcher abundance since 1997, we now anticipate that two southwestern willow flycatchers per decade will be taken as a result of death or injury due to collision with vehicles on the new US 93 Big Sandy Bridge for the length of the project. We also anticipate take of southwestern willow flycatchers from reduced productivity at two territories (nesting closest to the new US 93 Big Sandy Bridge) annually for the next ten years as a result of harassment and harm due to predation and brood parasitism caused by habitat reduction, fragmentation, and degradation.

The Fish and Wildlife Service will not refer the incidental take of any migratory bird or bald eagle for prosecution under the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. §§ 703-712), or the Bald and Golden Eagle Protection Act of 1940, as amended (16 U.S.C. §§ 668-668d), if such take is in compliance with the terms and conditions (including amount and/or number) specified herein.

### **Effect of Take**

In the accompanying biological opinion, we determined that this level of anticipated take is not likely to result in jeopardy to the southwestern willow flycatcher.

## **Reasonable and Prudent Measures and Term and Conditions**

We believe the following reasonable and prudent measures and associated terms and conditions are necessary and appropriate to minimize take of the southwestern willow flycatcher. In order to be exempt from the prohibitions of section 9 of the Act, FHWA must comply with the following terms and conditions, which implement the reasonable and prudent measures and outline required reporting/monitoring requirements. These terms and conditions are non-discretionary unless the private land owner refuses to allow access and implementation of flycatcher management activities.

### *Reasonable and Prudent Measure #1*

To the extent allowed by the local land owner and owner of any conservation easement, FHWA shall monitor southwestern willow flycatchers within the action area at the US 93 Big Sandy River site annually for the next 5 years (beginning in 2003) unless and until all nesting habitat suitability is lost.

### Term and Condition implementing Reasonable and Prudent Measure #1

If suitable habitat exists, determine flycatcher distribution, abundance, reproductive success, parasitism and predation rates, using Sogge *et al.* (1997), U.S. Fish and Wildlife Service (2000), and Rourke *et al.* (1998), or the FWS's currently accepted methodology.

### *Reasonable and Prudent Measure #2*

To the extent allowed by the local land owner and owner of any conservation easement, FHWA shall minimize adverse effects to flycatcher reproductive performance within the action area at the US 93 Big Sandy River Bridge site for the next 5 years (beginning in 2003).

### Terms and Conditions implementing Reasonable and Prudent Measure #2

- A. Develop a cowbird trapping program consistent with the methodology described in the Southwestern Willow Flycatcher Recovery Plan (U.S. Fish and Wildlife Service 2002) in cooperation with U.S. Fish and Wildlife Service. Traps can be placed near the nesting habitat and also at nearby cattle feeding sites depending on the use of nearby land and effectiveness. The triggers to begin trapping are 40 percent parasitism in one year, or an average of 25 percent parasitism over two or more years (U.S. Fish and Wildlife Service 2002). Once trapping begins it shall be maintained until the end of the 5 year period (2007 breeding season).
- B. If suitable habitat and occupancy of southwestern willow flycatchers is lost at the Big Sandy River Bridge after a trapping cycle has begun, trapping should cease. No nesting flycatchers would exist and as a result, no parasitism of flycatcher nests would occur.

*Reasonable and Prudent Measure #3*

FHWA shall report to the U.S. Fish and Wildlife Service and Arizona Game and Fish Department the results of reproductive monitoring; cowbird trapping; and any other notable observations on flycatcher natural history, habitat use and changes, management needs, etc.

Terms and Conditions implementing Reasonable and Prudent Measure #3

- A. Report the methodology, results, and discussion of flycatcher surveys, reproductive performance, and other notable observations on an annual basis consistent with the schedules described in U.S. Fish and Wildlife Service and Arizona Game and Fish Department permits.
- B. Report annually the methodology, results, and discussion of cowbird trapping efforts consistent with the schedules described in any U.S. Fish and Wildlife Service or Arizona Game and Fish Department permit.

The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize incidental take that might otherwise result from the proposed action. If, during the course of the action, the level of incidental take is exceeded, such incidental take would represent new information requiring review of the reasonable and prudent measures provided. FHWA must immediately provide an explanation of the causes of the taking and review with the AESO the need for possible modification of the reasonable and prudent measures.

**Disposition of Dead, Injured, or Sick Individuals of a Listed Species**

Upon locating a dead, injured, or sick listed species initial notification must be made to the Service's Law Enforcement Office, 2450 West Broadway Road #113 Mesa, Arizona 85202 (telephone: 480/967-7900) within three working days of its finding. Written notification must be made within five calendar days and include the date, time, and location of the animal, a photograph if possible, and any other pertinent information. The notification shall be sent to the Law Enforcement Office with a copy to this office. Care must be taken in handling sick or injured animals to ensure effective treatment and care, and in handling dead specimens to preserve the biological material in the best possible state.

**Conservation Recommendations**

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and



threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

1. We recommend initiating and implementing a program with other Federal, state, and private groups to seek out, acquire, manage, and bank flycatcher habitat to help offset the effects of future actions.
2. We recommend funding and implementing flycatcher surveys to determine presence, absence, distribution, abundance, reproductive performance, parasitism and predation rates on any land that might be acquired.
3. We recommend funding and implementing land management actions that would improve the amount and suitability of flycatcher habitat on any land that might be acquired.
4. We recommend funding and implementing land management actions such as (but not limited to) fencing and signing to maintain and protect the amount and suitability of any flycatcher habitat that might be acquired.
5. We recommend funding and implementing a cowbird trapping program as described in the Southwestern Willow Flycatcher Recovery Plan on any land that might be acquired.
6. We recommend developing a conservation easement (with the input of U.S. Fish and Wildlife Service and Arizona Game and Fish Department) with Byner Cattle Company if U.S. Bureau of Reclamation does not renew their existing easement.
7. If cowbird trapping is initiated at the Big Sandy River, we recommend trapping for 5 consecutive years as recommended in the Southwestern Willow Flycatcher Recovery Plan

In order for us to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, we request notification of the implementation of any conservation recommendations.

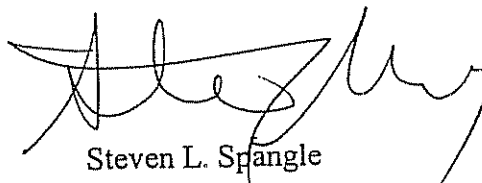
### **Reinitiation Notice**

This concludes formal consultation on the action(s) outlined in the reinitiation request. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals

effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

We appreciate FHWA's efforts to identify and minimize effects to listed species from this project. For further information please contact Greg Beatty (x247) or Debra Bills (x239). Please refer to the consultation number, 2-21-92-F-042R1, in future correspondence concerning this project.

Sincerely,



Steven L. Spangle  
Field Supervisor

cc: Regional Director, Fish and Wildlife Service, Albuquerque, NM (ARD-ES)  
Resource Area Manager, Bureau of Land Management, Kingman, AZ  
Director, Bureau of Reclamation, Boulder City, NV (Attn: John Swett)

Flycatcher Coordinator, Bureau of Reclamation, Phoenix, AZ (Attn: Susan Sferra)  
Byner Cattle Company, Bagdad, AZ (Attn: Jeff Campbell)  
Byner Cattle Company, Phoenix, AZ (Attn: Dan Kravets)  
John Kennedy, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ  
Region III Supervisor, Arizona Game and Fish Department, Kingman, AZ (Attn: Bob Posey)  
Habitat Specialist, Arizona Game and Fish Department, Kingman, AZ (Attn: Kevin Morgan)  
Nongame Birds Program Manager, Arizona Game and Fish Department, Phoenix, AZ  
(Attn: Rob Magill)  
Flycatcher Coordinator, Arizona Game and Fish Department, Phoenix, AZ  
(Attn: April Woodard)  
Environmental Planning Group, Arizona Department of Transportation, Phoenix, AZ  
(Attn: Rick Duarte and Larry Linder)  
George Ruffner, Ecoplan Environmental Consultants, Mesa, AZ

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## Appendix 1

Appendix 1 Agency actions that have undergone formal section 7 consultation and levels of incidental take permitted for the southwestern willow flycatcher rangewide.			
Action (County)	Year	Federal Agency <sup>1</sup>	Incidental Take Anticipated
<b>Arizona</b>			
Apache Maid Allotment (Yavapai, Coconino)	1995	USFS	None
Tuzigoot Bridge (Yavapai)	1995	NPS	Take of 1 WIFL each year the site is occupied
Windmill Allotment (Yavapai)	1995	USFS	Take of 1 WIFL nest annually for 2 years due to parasitism
Solomon Bridge (Graham)	1995	FHWA	Take of 2 territories
Tonto Creek Riparian Unit (Maricopa)	1995	USFS	Take unquantifiable. Take as a result of parasitism, disturbance, modification of nesting habitat, loss of nesting sites.
Eastern Roosevelt Lake Watershed Allotment (Maricopa)	1995	USFS	Take unquantifiable. Take as a result of parasitism, disturbance, modification of nesting habitat, loss of nesting sites.
Cienega Creek (Pima)	1996	BLM	Take of 1 WIFL nest annually by cowbird parasitism
Glen Canyon Spike Flow (Coconino)	1996	USBR	Take unquantifiable. Take of WIFL habitat, loss of riparian understory habitat
Verde Valley Ranch Development (Yavapai)	1996*	Corps	Take of 2 flycatcher territories
Modified Roosevelt Dam (Gila, Maricopa)	1996*	USBR	Take of 45 territories through habitat removal; take of 90 birds via reduced productivity/survivorship.
Lower Colorado River Operations and Maintenance - Lake Mead to Southerly International Border - AZ/CA/NV (Mohave, La Paz, Yuma)	1997*	USBR	Take unquantifiable. Take as a result of riparian habitat loss and degradation, inundation, reduced productivity and survivorship, nest loss/abandonment, parasitism, recreation, fire, predation.
Blue River Road (Greenlee)	1997	USFS	Take unquantifiable. Take of WIFL habitat, feeding, sheltering, increased rates of mortality, starvation, predation.
Skeleton Ridge - Cedar Bench Allotments (Yavapai)	1997	USFS	Take unquantifiable. Take of WIFL habitat.
White Canyon Fire -- Emergency Consultation (Pinal)	1997	BLM	Take of 4 WIFL pairs from harassment
U.S. Hwy 93 Wickenburg (Mohave, Yavapai)	1997	FHWA	Harassment of 6 birds in 3 territories and 1 bird killed/decade
Safford District Grazing Allotments (Greenlee, Graham, Pinal, Cochise & Pima)	1997	BLM	Take unquantifiable. Take as a result of parasitism, disturbance, modification of nesting habitat, loss of nesting sites.



Action (County)	Year	Federal Agency <sup>1</sup>	Incidental Take Anticipated
Lower Gila Resource Plan Amend. (Maricopa, Yavapai, Pima, Pinal, La Paz, Yuma)	1997	BLM	Take unquantifiable. Take of WIFL habitat through loss of cottonwood and willow seedlings, bark stripping, and trailing.
Storm Water Permit for Verde Valley Ranch (Yavapai)	1997	EPA	Take unquantifiable. Take in the form of degraded watershed and riparian WIFL habitat, and loss of WIFL habitat due to groundwater pumping and pollutants.
Gila River Transmission Structures (Graham)	1997	AZ Electric Power Coop Inc.	Take from harassment or harm due to habitat modification, reduced productivity, disturbance, parasitism.
Land and Resource Management Plans for the 11 National Forests and National Grasslands of the Southwestern Region of the U.S. Forest Service (Various AZ and NM)	1997	USFS	None
Phoenix Resource Management Plan (Apache, Navajo, Gila, Maricopa, Pinal, Pima, Santa Cruz, Yavapai)	1998	BLM	None
Yuma Resource Management Plan (Yuma, La Paz, Mohave)	1998	BLM	None
Arizona Strip Resource Mgmt Plan Amendment (Mohave)	1998	BLM	Take of 1 nesting attempt every 3 years. Take through parasitism, habitat loss from fire, recreation, development.
CAP Water Transfer Cottonwood/Camp Verde (Yavapai, Maricopa)	1998	USBR	Take unquantifiable. Take through parasitism, disturbance, modification of nesting habitat, loss of nesting sites.
Cienega Creek Stream Restoration Project (Pima)	1998	BLM	Take of 1 WIFL through harassment.
Kearny Wastewater Treatment (Pinal)	1998	FEMA	Take unquantifiable. Take through WIFL habitat loss, modification, harassment.
Fort Huachuca Programatic (Cochise)	1998	DOD	None
SR 260 Cottonwood to Camp Verde (Yavapai)	1998	FHWA	Take unquantifiable. Take as a result of harm, injury, and death as a result of the loss of nesting sites, disturbance, modification of habitat, reduced productivity and survivorship, parasitism, and collision with vehicles.
Wildlife Services beaver trapping activities	1998	Wildlife Services	in consultation
Alamo Dam Reoperation (LaPaz, Mohave)	1998	Corps	Take of a WIFL nest with 2 eggs/fledglings every 20 years due to inundation.

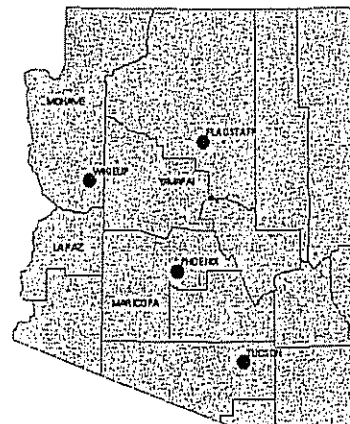
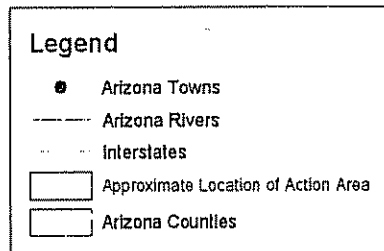
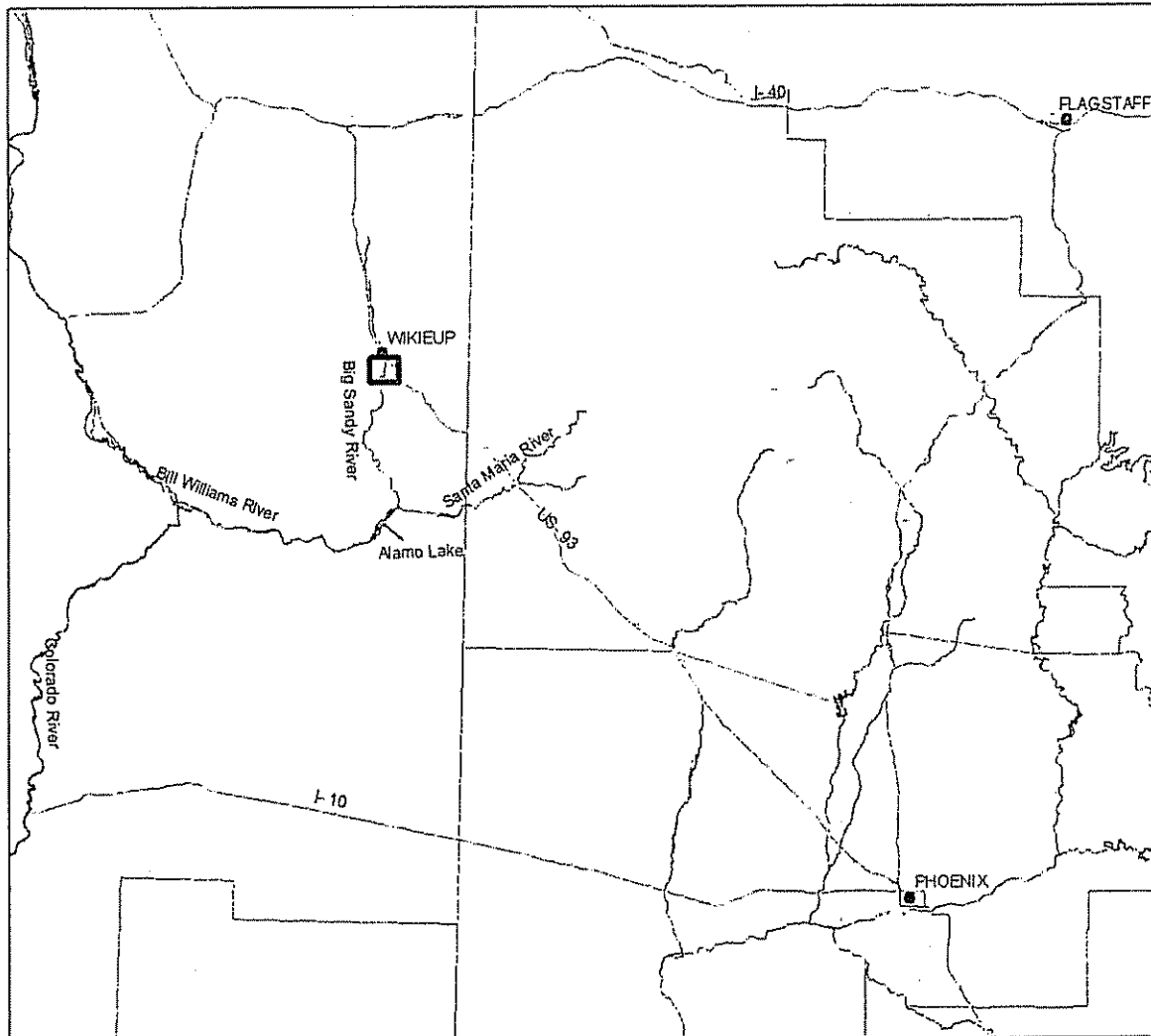
Action (County)	Year	Federal Agency <sup>1</sup>	Incidental Take Anticipated
Bridge Fire, San Pedro National Conservation Area, Emergency Consultation (Cochise)	1998	BLM	None
Reintroduction of Beaver into the San Pedro NCA (Cochise)	1998	BLM	Take of 1 WIFL nest every 5 years due to beaver, and 1 WIFL nest every 5 years due to flooding increased predation/parasitism
Duncan HWY 75 Bridge over Gila River (Greenlee)	2000	FHWA	None
Red Creek Grazing Allotment (Gila)	2000	USFS	None
Lower Colorado River, Interim Surplus Criteria Criteria/4 4 Plan (Mohave, La Paz, Yuma)	2001	USBR	Take of 372 acres of flycatcher habitat
Mingus Ave Extension, Bridge over Verde River (Yavapai)	2001	Corps	Take of 3 34 acres of flycatcher habitat
Pleasant Valley Grazing Allotment, Apache (Greenlee)	2001	USFS	None
Peck Canyon Scour HWY I-19 protection (Santa Cruz)	2001	Corps	None
Wikieup/Big Sandy Caithness power plant (Mohave)	2001	WAPA/BLM	in consultation
The Homestead at Camp Verde Development (Yavapai)	2001	EPA	None

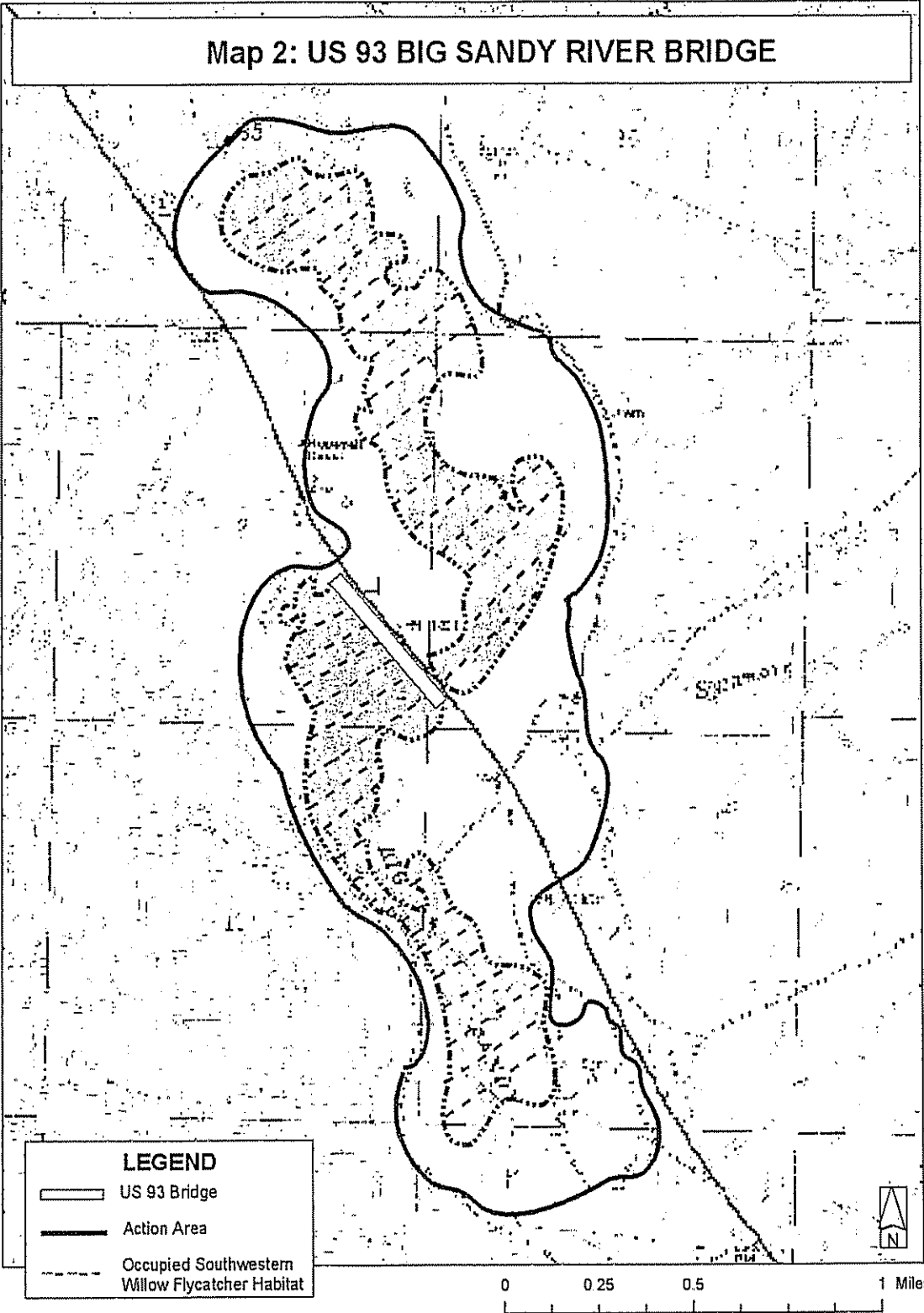
Action (County)	Year	Federal Agency <sup>1</sup>	Incidental Take Anticipated
25 grazing allotments on Tonto National Forest (Various)	2002	USFS	None
Eagle Creek watershed grazing allotments -Tule, Mud Springs, Double Circle, East Eagle, Baseline - Horse Spring and Dark Canyon (Greenlee)	2002	USFS	None
Dos Pobres -San Juan project (Graham)	2002	BLM	None
Gila River grazing allotments (Pinal)	2002	BLM	in consultation
Re-initiation of Lower Colorado River Operations and Maintenance - Lake Mead to Southerly International Border - AZ/CA/NV (Mohave, La Paz, Yuma)	2002	USBR	None
Re-initiation of Fort Huachuca Programmatic (Cochise)	2002	DOD	None
Issuance of Section 10 permit for Operation of Roosevelt Dam at Roosevelt Lake HCP (Gila, Maricopa)	2002	SRP	in consultation
Re-initiation of Modified Roosevelt Dam (Gila, Maricopa)	2002	USBR	in consultation
U.S. Hwy 93 Wickenburg (Mohave, Yavapai)	2003	FHWA	Harm and harassment of 4 birds in 2 territories from reduced productivity, displacement, reduced survivorship, 2 birds killed/decade, harm and harassment to 2 territories from reduced productivity annually for the next 10 years as a result of predation and brood parasitism

Action (County)	Year	Federal Agency <sup>1</sup>	Incidental Take Anticipated
<b>California</b>			
Prado Basin (Riverside/San Bernardino)	1994	Corps	None
Orange County Water District (Orange)	1995	Corps	None
Temescal Wash Bridge (Riverside)	1995	Corps	Take of 2 flycatchers
Camp Pendleton (San Diego)	1995	DOD	Take 4 flycatcher territories
Lake Isabella Operations 1996 (Kern)	1996	Corps	Inundation 700 acres critical habitat; reduced productivity 14 pairs
Lake Isabella Long-Term Operations (Kern)	1997	Corps	Annual inundation of 1,100 ac critical habitat
H.G. Fenton Sand Mine and Levee near Pala on the San Luis Rey River (San Diego)	1997	Corps	None
Re-initiation of Lake Isabella Dam Operation (Kern)	2000	Corps	inundation of 1,100 ac critical habitat and reduced survival and productivity of all nesting pairs and young
Questar's southern trails pipeline, CA, AZ, UT (various)	2000	FERC	?
Mill Creek Diversion, Prado Basin (Riverside)	2000	Corps	None
Level 3 long haul fiber optic network, San Diego CA to CA/AZ state line (San Diego, Imperial)	2000	BLM	?
Land and Resource Plans for 4 southern CA National Forests	2001	USFS	Take as described in 1-6-99-F-21, riparian species biological opinion
San Timoteo Creek Reach 3B Flood Control Project (San Bernardino)	2001	Corps	Take of 1 pair of flycatchers and 16.2 ac of flycatcher habitat
CA FDA 5-year permit for malathion use (Imperial, Riverside)	2001	BLM	2 flycatchers
Prado mainstem and Santa Ana River flood control and Norco Bluffs stabilization project (Orange, Riverside, San Bernardino)	2001	Corps	None
Four grazing allotments on San Bernardino NF (San Bernardino)	2001	USFS	None
Re-initiation of Cleveland NF grazing program (Orange, Riverside, San Diego)	2001	USFS	Two parasitized nests/year. Take through parasitism, nest abandonment, loss of eggs/young, degradation of nesting habitat
Highway 71 widening amendment (Riverside)	2002	FHWA	None

Action (County)	Year	Federal Agency <sup>1</sup>	Incidental Take Anticipated
<b>Colorado</b>			
AB Lateral -Hydroelectric - Hydropower Facility, Gunnison River to Uncompahgre River (Montrose)	1996	USBR	None
TransColorado Gas Transmission Line Project (Meeker, Colorado to Bloomfield, New Mexico)	1998	BLM	None
Pagosa Area Water and Sanitation District Water Intake (Archuleta County)	2000	Corps	1 pair of flycatchers
US Highway 160/County Road 501 widening -realignment, Bayfield (La Plata County)	2001	FHWA	2 pairs of flycatchers
Archuleta County Rd 119 widening/realignment, Pagosa Springs (Archuleta County)	2001	Corps	1 pair of flycatchers
<b>Nevada</b>			
Gold Properties Resort (Clark)	1995	BIA	Take of 1 flycatcher from habitat loss
Las Vegas Wash, Pabco Road Erosion Control Structure	1998	Corps	Take of 2-3 pairs of flycatchers
<b>New Mexico</b>			
Corrales Unit, Rio Grande (Bernalillo)	1995	Corps	None
Rio Puerco Resource Area (Various)	1997	BLM	None
Taos Resource Area (Various)	1997	BLM	1 pair of flycatchers
Caballo Resource Area (Various)	1997	BLM	None
Farmington District Resource Management Plan (Various)	1997*	BLM	None
Mimbres Resource Area Management Plan (Various)	1997*	BLM	1 pair of flycatchers
Discretionary actions related to water management on the Middle Rio Grande River (various)	2001*	USBR/Corps	None
BIA = Bureau of Indian Affairs; BLM = Bureau of Land Management; Corps = Army Corps of Engineers; DOD = Dept. of Defense; EPA = Environmental Protection Agency; FEMA = Federal Emergency Management Agency; FHWA = Federal Highway Administration; NF = National Forest; NPS = National Park Service; USBR = U.S. Bureau of Reclamation; USFS = U.S. Forest Service; WAPA = Western Area Power Administration.			
* Jeopardy opinions.			

# Map 1: Locator Map for US 93 Big Sandy Bridge







OFFICE OF THE ATTORNEY GENERAL  
STATE OF ARIZONA

CIVIL DIVISION  
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WRITER'S DIRECT LINE: 602.542.8855

TERRY GODDARD  
ATTORNEY GENERAL


**INTERGOVERNMENTAL AGREEMENT**  
**DETERMINATION**

A.G. Contract No. KR03-1297TRN (JPA 03-037), an Agreement between public agencies, has been reviewed pursuant to A.R.S. § 11-952, as amended, by the Undersigned Assistant Attorney General who has determined that it is in the proper form and is within the powers and authority granted to the State of Arizona.

No opinion is expressed as to the authority of the remaining Parties, other than the State or its agencies, to enter into said Agreement.

DATED: April 1, 2004.

TERRY GODDARD  
Attorney General

  
SUSAN E. DAVIS  
Assistant Attorney General  
Transportation Section

SED/mjf  
Attachment  
837657